

REMARKS

The claims are 15 to 21.

The above amendment is responsive to points set forth in the Official Action as will be discussed below.

As for the election of species requirement dated January 12, 2006, Applicants elected, as the specific protein species, “animal proteins derived from milk” and as the specific sugar species “lactose”.

The election of species requirement was silent with regard to claims 15 to 21 and no species were elected with regard to claims 15 to 21.

In support of the election of species requirement, the Examiner cited Aga et al. (U.S. 2002/0068094) which is said to disclose the use of saccharides and proteins to inhibit the growth of *Helicobacter pylori*. However, Aga et al. merely discloses an extract comprising an ethyl acetate-soluble ingredient of an indigo plant. Proteins and saccharides are merely described as materials and/or ingredients generally used in food products.

Granted that a product of browning reaction may be included in the food products described in [0032] and [0033], Aga et al. does not disclose or suggest a method for inhibiting *Helicobacter pylori* adhesion by administering a product of browning reaction nor a method for treating diseases associated with *Helicobacter pylori* by administering a product of browning reaction, as recited in claims 15 to 21.

Thus, the use of Aga et al. to support the election of species requirement is at best an improper hindsight reconstruction of the claimed present invention and in no way supportive of any allegation that the species lack unity of invention in that they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Accordingly, withdrawal of the election of species requirement is respectfully requested.

Claims 1, 14 and 19 to 21 are rejected under 35 U.S.C. 11, first paragraph, because the specification, while being enabling for ameliorating diseases associated with *Helicobacter pylori*, is said to not reasonably provide enablement for preventing diseases associated with *Helicobacter pylori*.

In reply, the present claims are now directed to a method for inhibiting *Helicobacter pylori* adhesion and amended claims 19 to 21 no longer contain any reference to “preventing”.

Thus, the present claims are fully enabled and are free from the rejection under 35 U.S.C. 112, first paragraph.

With regard to the comment that claim 9 is indefinite, Applicants respectfully disagree since it is conventional to express absorbance in terms of nm. In any event, this rejection is moot in view of the cancellation of claim 9.

The rejection of claims 1 to 17 and 14 as anticipated by or as obvious over Kim et al. (U.S. 6,627,238), is moot in view of the cancellation of such claims.

The rejection of claim 1 as anticipated by or as obvious over “Science of Candy” is also moot in view of the cancellation of claim 1.

Claims 1 to 21 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. 6,627,238) in view of Kodama (U.S. 6,828,298).

This rejection is respectfully traversed.

Kim et al. discloses the well-known Maillard reaction, but does not disclose or suggest that the product of such reaction is used as an adhesion inhibitor for *Helicobacter pylori*.

Kodama merely discloses a glycoprotein capable of binding to *Helicobacter pylori* urease.

The product of a browning reaction is very different from a glycoprotein. The browning reaction is a chemical reaction comprising a heating step. The reaction produces a product from an aminocarbonyl reaction, which is chemically and structurally unobvious from a glycoprotein.

For example, mucin is known as a glycoprotein composed of 10-20 % wt of protein and 80-90 %wt of carbohydrate (sugar). The glycoprotein has a structure wherein N-acetyl-D-glucosamine of carbohydrate is bound to a hydroxyl group of serine or threonine in a protein via a glycosyl linkage. In this browning reaction, amino groups such as ε-amino groups of lysine in a protein are modified and the product of the reaction exhibits a chemical structure similar to lysyl pyrrole, maltosin, acetylpyrrole,

pentosidine or melanoidins (brown pigments). A product of browning reaction and a glycoprotein are thus very different in chemical structure and properties.

Kodama merely discloses that a glycoprotein, which is very different from a product of browning reaction, can bind to *Helicobacter pylori* urease. In contrast, the present inventors have discovered that a product of browning reaction can also inhibit *Helicobacter pylori* adhesion.

Accordingly, the rejections on prior art are untenable and should be withdrawn.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any questions or comments for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

Shigeru HIRAMOTO et al.

By: Matthew M. Jacob
Matthew M. Jacob
Registration No. 25,154
Attorney for Applicants

MJ/kes/kjf
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
May 30, 2006